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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant: Maria Anna Wubben, et al.
Title: PECTINS AS FOAM STABILIZERS FOR BEVERAGES HAVING A
FOAM HEAD
Serial No.: 08/776,321 Art Unit: 1761
Filing Date: April 15, 1997
Examiner: Curtis E. Sherrer
Docket No.: 29865

RESPONSE

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

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This Response is filed in response to the Office action mailed July 21, 2000 in which applicant was given until August 21, 2000 to supply an omission noted by the Examiner in applicant's May 8, 2000 Amendment. Applicant's May 8, 2000 Amendment was in response to the Examiner's Office action mailed February 7, 2000. In connection with the February 7 Office action, applicant's undersigned counsel and the Examiner conducted a telephone interview on April 28, 2000 in which the Bukovskii reference (along with other references) was discussed. In the Examiner's Interview Summary Report of the April 28 interview, the Examiner states that applicant will also consider submitting further declaratory evidence comparing commercial beet

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John P. Murtaugh

Name of Attorney for Applicant(s)

August 17, 2000 John P. Murtaugh

Date

Signature of Attorney

pectin extract with the claimed invention to overcome the Bukovskii disclosure. Applicant is now undertaking to submit such a Declaration.

The Bukovskii reference teaches the use of beet pectin. In the previously submitted Declaration of Alexandra Wijsman, filed July 30, 1999, test data was supplied comparing hop pectin and beet pectin for improvement in foam stability in a reference pilsner beer. The Declaration showed that the hop pectin improved the foam stability of the reference beer dramatically and surprisingly more than the beet pectin. On average, the beet pectin improved foam stability 50 seconds. On average, the hop pectin improved foam stability 123 seconds, a dramatic and surprising improvement. In the April 28 interview, the Examiner was concerned that the non-pectin component in the beet pectin extract used in the test was different from the non-pectin component in the hop pectin extract used in the test, and that this prevented a fair comparison from being made. The present Declaration attached hereto is directed towards this concern and shows convincingly that the non-pectin component in the beet pectin extract is not significantly different from the non-pectin component in the hop pectin extract and that, accordingly, the previously submitted test data showing the surprising improvement of hop pectin over beet pectin can be relied upon.

In paragraphs 3-13 of the attached Wijsman Declaration dated August 15, 2000, a rather detailed experiment was conducted where the amount of anhydrogalacturonic acid (AUA) (AUA is a principal component of pectin) was increased, and the amount of non-pectin components such as proteins was decreased. The test showed that as the amount of AUA increased, the foam stability also increased. This shows that the pectin component is the component responsible for the foam stability. Paragraph 13 of the attached Wijsman Declaration states "The test data show that as the amount of anhydrogalacturonic acid in the hop pectin preparation increases, the foam stability also increases. ... These results show that the pectin component is the component responsible for

the foam stability and not the non pectin components present in the hop pectin preparation."

In paragraph 14 of the attached Wijsman Declaration, a commercial beet pectin preparation used in the July 1999 Declaration was analyzed for its constituents. It was shown that the composition of that beet pectin was (by weight percent): 59.9% AUA, 19.7% neutral sugars, 4.3% denatured protein, 1.4% phenolic compounds and 2.6% ash. It can be seen that this chemical composition is similar and comparable to the corresponding composition of hop pectin preparations A and B shown in paragraph 9 of the August 2000 Declaration. Paragraph 14 of the Wijsman Declaration goes on to state:

"On the basis of my experience, training and expertise in the area of improving foam stability with the addition of pectin preparations and also comparing this beet pectin preparation composition with the hop pectin preparation compositions described in Paragraph 9 above, it is my opinion that the non-pectin components in the hop pectin preparations and in the beet pectin preparation perform in substantially the same way with regard to foam stability."

Upon comparing the composition formulations and the above statement, it is clear that the Examiner's concerns have now been addressed. The Examiner was concerned that the non-pectin component in the beet pectin extract was sufficiently different from the non-pectin component in the hop pectin extract so that a fair comparison of the foam stabilizing effect of the two extracts could not be made. It is now clear that the non-pectin components in the two extracts perform in substantially the same way with regard to foam stability and that the non-pectin components in the two extracts are not so different that a fair comparison cannot be made. The foregoing simply confirms and validates the conclusions reached in the July 1999 Wijsman Declaration, wherein it was concluded that the hop pectin improved foam stability in reference beer dramatically and surprisingly more than the beet pectin (on average, the beet pectin improved foam stability 50 seconds; on average, the hop pectin improved foam stability 123 seconds, a dramatic and

surprising improvement. See, July 1999 Wijsman Declaration, paragraph 6).

From all of the foregoing, it is clear and it has now been established that the non-pectin components in the hop pectin and beet pectin extracts are not sufficiently different so as to prevent a fair comparison between the extracts from being made. This validates and confirms the conclusions reached in the July 1999 Declaration, that is, that hop pectin performs dramatically and surprisingly better than beet pectin with regard to foam stability in beer. The surprising and unexpected improvements shown by hop pectin, in comparison to beet pectin, clearly show the patentability of the present invention over the prior art represented by the Bukovskii reference.

Accordingly, for the foregoing reasons, it is believed that the invention has now been shown to be clearly patentable over the applied references, and a notice of allowance is respectfully requested.

If any further fees are required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. 29865.

Respectfully submitted,

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